

CLAIMS

1. A recording medium having a video stream, playlist information, and an entry map recorded thereon, wherein

5 the playlist information defines a playback path by indicating a sequence of one or more pairs of a playback start time and a playback end time within the video stream,

 the entry map indicates a plurality of entry points in the video stream, in one-to-one correspondence with a
10 plurality of entry times and flags,

and

 each flag indicates whether an intra picture located at a corresponding entry point is for causing decoder refresh.

15 2. The recording medium according to Claim 1, wherein

 the playlist information indicates the sequence of a plurality of pairs of a playback start time and a playback end time, and

20 a location of an intra picture for causing decoder refresh coincides with a playback start time of a first pair in the sequence.

3. The recording medium according to Claim 1, wherein

25 each pair of a playback start time and a playback end time constitutes a piece of playback section information defining one playback section,

 the recording medium further having mark information

recorded thereon, wherein

the mark information defines a chapter point in a playback section, using (i) an identifier of a corresponding piece of playback section information and (ii) time information of a video stream used in the piece of playback section information, and

a location of an intra picture for causing decoder refresh coincides with the chapter point.

4. A playback apparatus for executing playback of a video stream recorded on a recording medium, comprising:

a reading unit operable to read pictures contained in the video stream from the recording medium;

a playback unit operable to play back pictures contained in the video stream; and

a control unit, wherein

the recording medium has playlist information and an entry map recorded thereon,

the playlist information defines a playback path by indicating a sequence of one or more pairs of a playback start time and a playback end time within the video stream,

the entry map indicates a plurality of entry points in the video stream, in one-to-one correspondence with a plurality of entry times and flags, and

in response to a request for playback following the playback path, the control unit is operable to (i) specify a nearby entry time to a playback start time of the playback path, from among entry times corresponding to a flag set

to ON, and (ii) instruct the reading unit to start reading from an entry point corresponding to the specified entry time.

5 5. The playback apparatus according to Claim 4, wherein each picture located at a point corresponding to a playback start time is for causing decoder refresh,

each entry time corresponding to a flag set to ON indicates a time corresponding to a picture for causing
10 decoder refresh, and

a picture for causing decoder refresh is supplied to the playback unit by the reading unit reading pictures of the video stream starting from an entry point.

15 6. The playback apparatus according to Claim 4, wherein each pair of a playback start time and a playback end time constitutes a piece of playback section information defining one playback section,

the recording medium further has mark information
20 recorded thereon, and

the mark information includes an identifier of a piece of playback section information and time information indicating a chapter point in a playback section defined by the corresponding piece of playback section information,

25 the playback apparatus further comprising:

a chapter search unit operable to execute a chapter search function, wherein

the chapter search function is to (i) identify a piece

of playback section information using the identifier included in the mark information and (ii) start playback of a video stream containing the defined playback section from a chapter point indicated by the time information
5 included in the mark information, and

the control unit is operable to (i) specify, from among the plurality of entry points, a nearby entry time to the time information included in the mark information and (ii) cause the playback to be started from an entry point
10 corresponding to the specified entry time.

7. The playback apparatus according to Claim 6, wherein a picture located at a point corresponding to the time information included in the mark information is for causing
15 decoder refresh,

each entry time with a flag set to ON shows a playback time of a picture for causing decoder refresh, and

a picture for causing decoder refresh is supplied to the playback unit by the reading unit reading the video
20 stream starting from a picture located at an entry point corresponding to an entry time with a flag set to ON.

8. The playback apparatus according to Claim 6, further comprising:

25 a chapter skip unit operable to execute a chapter skip function, wherein

the chapter skip unit is operable to (i) specify a piece of mark information defining a chapter that is immediately

preceding or following a chapter containing a current playback point and (ii) cause the chapter search unit to execute chapter search using the specified piece of mark information.

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9. A program for causing a computer to execute playback of a video stream recorded on a recording medium, said program comprising code operable to cause the computer to perform:

10 a step of reading pictures contained in the video stream from the recording medium;

a step of playing back pictures contained in the video stream; and

15 a step of controlling, wherein the recording medium has playlist information and an entry map recorded thereon,

the playlist information defines a playback path by indicating a sequence of one or more pairs of a playback start time and a playback end time within the video stream,

20 the entry map indicates a plurality of entry points in the video stream, in one-to-one correspondence with a plurality of entry times and flags, and

25 in the controlling step, in response to a request for playback following the playback path, (i) an entry time that is near a playback start time of the playback path is caused to be specified from among entry times corresponding to a flag set to ON, and (ii) the reading in the reading step is caused to start from an entry point corresponding to the specified entry time.

10. A method for executing playback of a video stream recorded on a recording medium, comprising:

a step of reading pictures contained in the video stream
5 from the recording medium;

a step of playing back pictures contained in the video stream; and

a step of controlling, wherein

the recording medium has playlist information and an
10 entry map recorded thereon,

the playlist information defines a playback path by indicating a sequence of one or more pairs of a playback start time and a playback end time within the video stream,

the entry map indicates a plurality of entry points
15 in the video stream, in one-to-one correspondence with a plurality of entry times and flags, and

in the controlling step, in response to a request for playback following the playback path, (i) an entry time that is near a playback start time of the playback path
20 is caused to be specified from among entry times corresponding to a flag set to ON, and (ii) the reading in the reading step is caused to start from an entry point corresponding to the specified entry time.